



September 27, 2013

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
455 12<sup>th</sup> St. SW  
Washington DC 20554

RE: **EX PARTE** in Amendment of the Commission's Rules in Regard to  
Commercial Operations in the 3550-3650 MHz Band, GN Docket No. 12-354

Dear Ms. Dortch:

On September 26, 2013, Peter Ecclesine and I met with the following FCC staff members concerning the above captioned docket: John Leibovitz, Brian Regan, Paul Powell, Steve Buenzow, John Lambert, Kamran Etemad, all from the Wireless Bureau, and Renee Gregory, Karen Rackley, Bob Paviak, Navid Golshahi, Garth Hahn, Bryant Wellman, all of the Office of Engineering and Technology. In a separate meeting, Cisco met with Robert Nelson and Chip Flemming of the International Bureau.

Cisco stated that it had not filed comments in the docket, and had no position at this time on the broader issues raised by the Notice on spectrum rights. Cisco has closely been following those portions of the debate concerning technical approaches to maximize the use of spectrum in the band, as many of the same issues appearing in the 3.5 GHz band are also raised in the 5 GHz band. Cisco stated that it hoped the Commission would evaluate all possible technical solutions to resolving interference conflicts.

With respect to earth station licenses in the band, Cisco noted that there are three approaches to protecting operations. Cisco noted that the Notice proposed to extend grandfathering protection to earth stations not collocated with existing grandfathered sites, noting that if the existing 150 mile circular protection zones are applied, the band becomes much less useful for commercial operations. Cisco noted that this is one key reason why the 3650-3700 MHz band had not received much uptake in usage. Cisco also noted that earth station farms can be protected by fencing constructed of a conducting material that will block interfering signals, and that the stations themselves can use filtering to guard against terrestrial interference. Maximizing the use of spectrum in the band is

important, and Cisco urged the Commission staff to consider new approaches such as those highlighted above.

Cisco also discussed the use of a spectrum access system, and urged the Commission to examine and compare the attributes of all available systems in reaching an optimal decision. While the ASA/LSA option has been briefed, and the Commission is well familiar with its TV white spaces approach, developments in IEEE 802.11af might be less well understood. Cisco stated the draft standard is intended to be a flexible database approach to spectrum management, providing the benefits of location awareness along with multiple options for informing and directing transmitters under its control. Cisco compared the Ofcom (UK) white spaces rules, in which edge devices (small cells) must repeatedly interact with a database to the unlicensed dynamic frequency selection approach where devices act autonomously based on what they sense. The 802.11af approach was intended to introduce the benefits of having a database operated in an enterprise or service provider domain interact with edge devices that are protected by a firewall. Compared to the Ofcom approach, this is a much more useful way of directing devices to utilize spectrum in that devices operating behind a corporate or service provider firewall can now receive and act on dynamic messages from the database system. Cisco urged the Commission to add the 802.11af standard to its list of technologies to examine. That standard is on schedule to be completed in early 2014.

Sincerely,

CISCO SYSTEMS, INC.

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